



[Home](#) > [Health](#) > [Product safety](#) > [Consumer Product Safety](#)

> [Reports and Publications – Consumer Product Safety](#) > [Pesticides and pest management reports and publications](#)
> [Fact Sheets and Other Resources](#)

Sex- and Gender-based Considerations in the Scientific Risk Assessment of Pesticides in Canada

Pesticides must undergo a high level of scientific evaluation before they can be registered for use in Canada. Companies applying to register a pesticide must provide Health Canada with a large number of health and environmental studies, which must follow internationally accepted scientific standards.

When a pesticide is being evaluated for its potential risks to human health, the Pest Control Products Act requires Health Canada to take into account that chemicals may pose higher risks to groups of people based on differences in biology and behaviour, for example differences due to sex, gender, age and occupation.

Health Canada's risk-based approach to evaluating and regulating pesticides recognizes that many pesticides work by having toxic properties. Determining whether a pesticide can be used safely requires scientific assessment of:

- whether the properties of the pesticide also pose risks to human health and the environment; and

- whether the pesticide can be used in a way that does not pose those risks

If the health and environmental risks of a pesticide cannot be safely managed, the product will not be registered for use in Canada.

Biological considerations: toxicity

Toxins can have different effects on males and females due to differences in physical processes, hormones and hormone changes throughout life, body fat, organs, and size. The effects of toxins on pregnant women, the developing fetus and breastfed children must also be considered carefully.

All human health toxicity studies must include both male and female subjects. This approach allows for the consideration of sex across all possible ways of being exposed.

Examples of sex-specific toxic effects include:

- Organ-specific functions (breasts, testes, ovaries, uterus)
- Certain types of cancer
- Fertility
- Fetal growth and development

Behavioural considerations: exposure

Depending on where a pesticide is used, for example in industrial settings, on farms or in the home, one gender may be expected to have greater exposure to a pesticide. Regardless of which gender is expected to be more exposed to the pesticide, Health Canada evaluates risks to males, females, and vulnerable populations in environments where exposure might happen.

Examples of pesticide exposure routes and environments include:

- Occupational
- Dietary
- Drinking water
- Exposure through skin
- Residential/bystander
- Breast milk
- Prenatal

Consideration of vulnerable groups, including pregnant women, infants, children, women and seniors, is a requirement of the Pest Control Products Act. The level of health protection needed by the most vulnerable group in is applied to all individuals, regardless of sex and gender.

Looking Ahead

Canada's approach to pesticide regulation allows new science and data to be used in the assessment and management of pesticide risks before a pesticide is registered, and after it enters the marketplace.

Through our re-evaluation program, scientific review of each pesticide against modern standards is initiated every 15 years. Information collected through monitoring, incident reporting and compliance and enforcement is continually improving our ability to identify and reduce risks related to pesticide use. Our work with international partners allows Canada to participate in the development of new science, with a continued focus on health and environmental protection for all Canadians.

Health Canada's regulatory decisions on pesticides include summaries of the science on which those decisions are made, including any sex- and gender-related analysis. For more information, you can find regulatory decisions in the Pesticides and Pest Management [Reports and Publications](#) portion of Canada.ca.

- [Infographic: Consideration of Sex and Gender in Pesticide Risk Assessment](#)

Date modified:

2020-01-21